

Specialty Crops Competitive Grant Program

A Panel Review Report

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INTRODUCTION

Background

An External Panel conducted this Review of the Specialty Crops Research Initiative (SCRI). The Review was planned and authorized by NIFA at the inception of the SCRI Program which was authorized in the 2008 Farm Bill. The objective of the Review was to make a fundamental assessment of the SCRI Competitive Grant Program. The purpose of the SCRI Program identified in the Farm Bill is: “to address the critical needs of the specialty crop industry by developing and disseminating science-based tools to address needs of specific crops and their regions...” This Review is unique in that there have been very few such broad program assessments in the Agency. The Review involved a significant diversity of panelists from the public and private sector, representing broad interests and diverse areas of expertise. The Panel expresses its appreciation for the opportunity to be involved in this unique Review.

A self-study document developed by NIFA staff was the principle base for this Review. In addition, there were supporting documents, specific information provided by the Program based on Panel inquiry, on site discussions, and a Q & A session during the Panel meeting (January 24-27, 2011) in Washington, DC. The Panel also queried other individuals from around the country who had a role in developing, interacting with and managing the SCRI Program. The Panel commends the leadership of the SCRI Program for developing an informative Study Document and for their timely and direct response to Panel questions. Based on the above the Panel has made some observations, offers some ideas and presents recommendations.

Assessment

The 2008 Farm Bill, which mandated the establishment of the SCRI, was not enacted into law until late in FY 2008. This presented a unique challenge to launching a competitive grant program. The SCRI Competitive Grant Program was initiated in a highly compressed schedule, in fact probably a record time for a competitive grant program. This stepped up launch in the first year was made possible through the foresight and planning by NIFA staff who held listening sessions, developed white papers and consulted with the specialty crop community. The SCRI Program leaders and associates within USDA/NIFA are commended for their development of an excellent RFA for FY 2008 within an extremely short time frame. Twenty-seven grants were awarded that first year. Those grants are now in mid-stream and have already shown significant accomplishments. The Panel strongly endorses the SCRI Program managed in NIFA.

The SCRI is a well-orchestrated competitive grant program. The SCRI Grant Program follows the Farm Bill guidelines and adheres to the federal grant process. The U.S. production of specialty crops is important to the general population and this Program serves a critical role in helping to develop tools to support their continued production, use and global competitiveness. Beyond the contribution that specialty crops make to the U.S. economy, the value of these commodities ranges from their role in a healthy diet and improved human health to enhanced aesthetics in the home and landscape. Prior to the 2008 Farm Bill there was a comparatively small federal competitive grant investment directed specifically to enhance specialty crop profitability and availability.

The SCRI represents the first national competitive grant research program targeted solely to address needs of specialty crops. Its ultimate authorization is a testimony to the initiative and effort of the specialty crop

stakeholder community. Stakeholder involvement in Program definition and implementation provides a mechanism to ensure the continued relevancy of the SCRI for meeting the needs of the very diverse crop spectrum and geographically unique production practices associated with specialty crops. The Program thrust is to address critical needs and solve problems with significant stakeholder involvement. The Agency has given attention to the involvement of stakeholders in developing the SCRI Program.

The RFA for SCRI is open, fair, thorough and encompasses the Farm Bill guidelines. The RFAs have been published in association with available funding for the SCRI Program. The RFA provides the applicants clear directions on the requirements for a proposal and identifies the process involved in the SCRI grants. The RFA and award process upholds the Agency commitment to excellence and quality through the peer review process. Further, resubmitted proposals had good success which speaks positively to the “coaching and useful critique” provided by the peer panel proposal review process.

FOCUS

Specialty crop needs, relevancy

As stated in the authorizing legislation, the purpose of the SCRI Competitive Grant Program is “to address the critical needs of the specialty crop industry”. This legislation further defined specific areas to be addressed through the grant process. Historically, in the competitive grant research programs, the demonstrated industry need and stakeholder involvement have not factored as significantly into the development and evaluation process as compared with scientific merit. Thus, identifying and assessing need cooperatively with the stakeholder community may be relatively new to some applicants and reviewers.

In order to strengthen the relationship between SCRI Program implementation and Congressional intent, the ***Panel recommends developing and enhancing the need/relevancy criteria and evaluation information in the RFA to better establish the assessment of need in the evaluation process.*** An expanded set of criteria and descriptive language for the need criteria would create a more definitive and consistent approach to assessing need. Descriptors, indicators, and/or metrics, for example, may serve as an aid to applicants, stakeholders and review panelists in identifying and grading need. With regard to the stakeholder, the Panel understands that sectors in the specialty crop community often identify a relatively extended

list of needs. It would be most useful if the needs were clearly prioritized, preferably in a manner that enabled grant applicants and reviewers to readily grasp the highest priorities/critical needs. Prioritizing needs is an important leadership role for stakeholders.

The ***Panel recommends*** that need and relevance be given increased emphasis and visibility in the proposal evaluation process. There should be a more defined method for grading need and relevancy. Suggestions for consideration by the Program in implementing this recommendation include:

- Increase the current 10-point maximum assigned to need. Additional points could be taken from the “Adherence to guidelines” criteria. Presumably the adherence to guidelines evaluation would be covered in the initial management screening of proposals and could therefore be eliminated from the peer panel review, i.e. if a proposal does not adhere to guidelines it would not be reviewed. Another possibility would be to transfer some points from “Systems-based and/or Trans-disciplinary” criteria. While both criteria are relevant there is redundancy in these criteria.
- Another approach would be to constitute a relevancy panel made up primarily of stakeholders that would grade need/relevance before a proposal is evaluated for quality/scientific merit. Only those proposals with an acceptable score for need and relevancy would go forward for comprehensive evaluation.

While grading proposals for need and relevance is important, scientific evaluation is intrinsically related to industry need. When the need criteria are satisfied, it is critical that SCRI fund only those proposals passing a rigorous scientific assessment, as is done in the current system.

The Panel recognizes that assessing need has been a component in awarding grants in this Program. The point here is to give increased attention to the area through further emphasis on the needs criteria and by ensuring that the identification of need by commodity sector results in a limited number of priorities. Increased involvement by stakeholders in establishing prioritized needs and relevancy would be a benefit to the Program.

Relevancy review

The relevancy review would not weigh A against B to evaluate which was the more important crop. The matter of relevance should not be based on the size of the industry or the economic impact of a particular issue but

rather that stakeholders were engaged in a specialty crops strategic planning action which identified and prioritized needs. The review of relevancy would be a judgment, a measure of the degree to which evidence was submitted that stakeholders were engaged in priority setting/strategic planning.

Stakeholder role

The SCRI was created to address the research priorities of the specialty crop industry, and accordingly, in this problem solving competitive grant program the specialty crop stakeholders are critical to the Program's success. The stakeholders were instrumental in securing legislative approval for the SCRI Grant Program. They have been involved in identifying needs, developing funded projects, and serving on proposal review committees. However, the Panel is concerned that there is a decreasing number of stakeholders participating on proposal review committees (25% in 2008, 12% in 2010).

The ***Panel recommends*** that NIFA further promote and strengthen the stakeholder involvement in additional ways, for example by constituting an entity such as a broad based stakeholder liaison committee. Such a committee should benefit the specialty crop industry, SCRI and the Agency. Roles envisioned for a "stakeholder committee" include (but are not limited to): 1. assist and provide leadership to commodity groups in developing a focused and prioritized list of needs, 2. maintain regular programmatic liaison and council to SCRI, 3. assist in identifying characteristics, milestones and evaluation points for grading "need/relevancy" in proposals, 4. resource for proposal relevancy review. In the Review the Panel learned that needs lists are frequently quite lengthy and not prioritized. Focused needs lists is an area that stakeholders should lead in developing and this could be done through a Planning Grant as discussed later in this report. While NIFA staff can assist in developing priorities the real work needs to be accomplished by the stakeholder community. Given the SCRI Program is to be focused on industry needs, it would appear to be advantageous for the Agency to have "a stakeholder committee of reference".

Further, a stakeholder committee at the project level could have a key role in assessing grant progress. The ***Panel recommends*** that the RFA require each grant to have an active "Project Stakeholder Committee" to serve during the life of a project. Its identification and role should be described in the proposal. Annual reports from the stakeholder committee to the awardees and NIFA would strengthen the funded project and SCRI.

APPROACH

The Panel identified a number of approaches that have the potential to enhance the Grant Program and move forward in a continuous positive evolution.

Planning Grants

Many of the larger national and regional specialty crop growers have had strong teams of industry representatives to define research needs. However, the more localized and smaller groups typically have no or a minimal organized working group. This has limited the number and quality of proposals submitted from the smaller specialty commodity industry to the SCRI through its initial RFA cycles. The Panel views the Planning Grant component of the current RFA process as an important mechanism to provide support to these smaller/lower acreage or underrepresented groups.

The opportunity to apply for Planning Grants in the SCRI Program is an excellent option. Benefits have already been observed where the Planning Grant has been used to build a successful grant proposal. The ***Panel recommends that the language in the RFA be modified to clearly state that there is opportunity to apply for two types of Planning Grants: 1. to develop a strategic plan for a commodity to identify need/relevance, priorities, and research partners, and 2. to develop a competitive research proposal.*** The first will be especially useful to commodities that have minimal to no infrastructure to address needs and planning, for example commodities that are low acreage and/or commodities with less access to resources.

RFA language for specific targeted projects

For the SCRI Program the 2008 Farm Bill gives a high priority to projects that are multistate, multi-institutional or multidisciplinary (multi approach). The Panel concurs that a multi approach is highly desirable but notes that the SCRI is not limited by law to this approach and questions whether the multi approach should apply to the entire SCRI Grant Program and whether the multi approach fully serves such a diverse industry as specialty crops. The spectrum of crops and the diversity in the production and processing arenas served by the SCRI are innumerable and the needs are many and diverse. This includes (but is not necessarily limited to) problems

highly specific to a region/production size or method; a problem that impacts a commodity which is an issue common to more than one commodity; a specific commodity production or processing practice; quality impact in storage and shipping; development and integration of information.

While all the research should be done within the context of a Commodity Plan it is quite possible that in some situations a targeted, fundamental research project is needed to address a significant industry need. Also, this approach holds the potential for high impact. It may be the most effective approach and it may be the expeditious way to advance efforts to address a particular specialty crop need.

Accordingly, the ***Panel recommends that definitive language be incorporated in the RFA to invite “specific targeted projects”***. That said, projects addressing a specific problem and involving a limited number of scientists should be conducted within a citable Commodity Plan with a framework identified in the proposal. Such projects would address a critical limiting issue in a Plan without engaging the multi approach in the actual project. The multi approach can be expensive and may exclude industry priority projects therefore limiting the Program’s success. Specific targeted projects could also have the advantage of saving time thus moving the field forward more rapidly to address a specific constraining issue in a system. Further this approach may attract unique science expertise that would not be in a position to engage in a multi approach but would be available to address an issue that is limiting in the greater specialty crop arena. The Panel believes this recommendation can be accommodated within the Farm Bill authorization while not incurring a discriminatory point allocation in the evaluation process.

Scientific review expertise

One of the challenges in reviewing grant proposals is identifying and involving reviewers who don’t have a conflict of interest. This is particularly relevant in specialty crops given the industry and scientific community has a limited number of individuals with the expertise required for a proposal review committee. The Panel acknowledges that addressing conflict of interest is important in the competitive grant proposal review process. The ***Panel recommends that NIFA consider involving scientists from outside the immediate specialty crop arena who have relevant credentials***. For example, expertise in plant genetics could be valuable for reviewing proposals that involve genetics regardless of whether the scientific expertise is in specialty crops.

Logic model

The Panel commends the Program leaders for producing a draft program logic model for SCRI. This logic model is a good first step in conceptualizing and developing a set of measureable program metrics. The ***Panel recommends that the model be reviewed and developed further by: 1. enlisting an expert in program logic modeling, 2. including additional NIFA staff, 3. involving stakeholders to assist in the refinement of a program logic model, and 4. exploring additional ways to visualize the program and its expected accomplishments (e.g., outputs and outcomes).***

Accomplishment reporting

Grant recipients are required to submit annual CRIS reports to describe project progress and accomplishments. The information requirements for the CRIS reports are minimal and do not readily enable the Agency, stakeholders or the public to determine the contributions that are being made to the specialty crop industry by the Program.

The Panel understands that there are constraints on specifying what level of project reporting information the Agency can request. However, the Panel believes that more information is needed in order to document and communicate Program performance.

The Panel learned about Program accomplishments through the Study Document and additional data from SCRI Program leaders and other experts. Also, grant recipients voluntarily contributed informative reports based on an informal invitation by the Agency in the recent RFA.

The ***Panel recommends that the Program establish an expanded reporting system to better document project description, approach, accomplishment, and impact.*** An examination of project reporting in other Federal Agencies and Departments produces examples of report formats that provide information to assess the performance of a program. The Panel also suggests that the logic model should provide guidance for developing an enhanced reporting system that would include identifying measurable outcomes, baseline, benchmarks, metrics, milestones or other targets. Additional strategies should be explored for the collecting and “rolling-up” of project level information to document Program trends, accomplishments and impacts.

The SCRI has conducted and completed three RFA/award cycles. Except for Planning Grants, none of the grants have reached conclusion. Even at mid-term in the SCRI Program there is evidence of significant accomplishment. The ***Panel recommends that NIFA develop a set of program metrics that identify the key indicators of SCRI Program success.*** The Study Document (page 7, a-g) included points that should be reviewed and prioritized.

The Panel recognizes the importance of scientific workforce development with expertise in the specialty crop arena in order to remain competitive in the national and global economies. The Panel encourages the Program to develop a method or mechanism to track students and post-docs who are involved in the research activities of the grants to document how the Program is building the scientific capacities and knowledge base in specialty crops.

eXtension

The eXtension project type is significantly different than the other project types; in fact, it might be viewed as an outlier. The major deviations are: 1. The sole role of eXtension is information and technology transfer, and basically doesn't involve research. All the other project types are a combination of research and extension 2. Fundamentally the eXtension project type is based on supporting another federal program that has other resources available. Further, the matter of stakeholder involvement is not a prime thrust of the federal eXtension program. Given these fundamental deviations there is a question as to whether eXtension is an appropriate component within the SCRI Program. It doesn't appear to have the same basic thrusts that are outlined for SCRI in the Farm Bill authorization. ***The Panel recommends that funding eXtension in the SCRI Competitive Grant Program be subjected to further review by NIFA, other government officials and stakeholders.***

OUTREACH

Participant diversity

The Agency has a culture of supporting the full range of specialty crops stakeholders. In the applications to the SCRI over the first three years, as many as 48 states and 59 crops were represented and investigators from over 40 states were actually funded. Although not expressly requested, the SCRI appears to have attracted solid proposals from a geographically and production diverse constituency.

SCRI's emphasis on the multi approach seems to be attracting a reasonable relative level of diverse participation. The Panel believes that more diversity could be achieved. The emphasis on the multi approach may limit the Program from being able to broadly address industry needs. For example, only about 3% of the awards were for truly small acreage crops (less than 10,000 acres). By their nature, these limited acreage crops are generally not in a position to engage a large number of researchers to develop projects. Yet, they too are critical to a healthy, diverse, and competitive specialty crop industry. In addition, the majority of the funded institutions were large land grant universities with very little representation by 1890, 1994 or Hispanic-serving institutions. Moreover, the Panel is aware of significant commodity production areas that were not able to secure funding for priority projects.

Given that the legislative guidelines and the RFA for the SCRI do not include diversity, it appears that the broad representation in applicants was achieved through serendipity. It is likely that reaching out to a range of underserved constituents to help them understand the process and requirements for submitting a high quality proposal would help increase the diversity of submissions and awards.

The *Panel recommends that the SCRI Program managers work with representatives of limited acreage crops and the 1890, 1994 and Hispanic-serving institutions to help build the infrastructure and capacity to submit competitive proposals that demonstrate industry need and are sound scientifically.* Commodities and institutions are at different levels of organization and capacity to respond to opportunities like SCRI and this appears to be reflected in the awards. Thus, specific assistance directed to these entities could facilitate their ability to become more competitive and enhance Program diversity.

The Panel discussed several possibilities to address reaching out to limited resource commodities and institutions. The Panel suggested: 1. consulting with the leaders of those entities on the most effective way to involve them in the SCRI, and 2. seeking and creating special ways and opportunities to brief leaders and faculty as well as individuals representing the lower acreage specialty crops. Building leadership in these organizations is key and could be enhanced by enlisting individuals from underserved entities to serve on committees and grant reviews. These institutions and areas are quite likely to have a smaller resource base for developing proposals and thus a unique grant-developing workshop might be beneficial.

Reporting/Marketing

In the previous section the Panel addresses the importance of having a useful and targeted reporting system to identify accomplishment. That is important for accountability purposes. Equally important is the identification of accomplishments that would form the base for outreach to stakeholders and the general public. The ***Panel recommends that the Agency develop an information marketing strategy for the Program and implement it using a broad-spectrum multi-media approach.*** This outreach activity will need to be orchestrated with the grant recipients.

FINANCE

100% match requirement

The Farm Bill states “*shall require the recipient of a grant under this section to provide funds or in-kind support from non-Federal sources in an amount that is at least equal to the amount provided by the Federal Government*”.

The ***Panel recommends that the 100% match requirement be significantly modified.*** Private sector investment in a grant may be interpreted as an indication of need and stakeholder validation. However, there are other ways to identify bona fide stakeholder validation that do not place an undue, differential and discriminatory burden on the diverse specialty crop base.

The Panel believes that the 100% match as currently implemented inhibits meeting programmatic goals and legislative intent. For example, the 100% match requirement is particularly burdensome for the lower acreage specialty crop producers, processors and marketers. The specialty crop industry is highly diverse in organization and economic status thus placing the needs of many specialty crops at a serious disadvantage.

Further, the Panel recognizes that the private sector in specialty crops will quite likely soon be in a position where key cooperators are “maxed out” for providing matching funds and/or in-kind support. This reduces/eliminates stakeholder involvement, discourages proposal submission, and therefore restricts Program impact. Continuing the 100% match will likely have a significant impact on the number of proposals submitted.

Generally “outside investment” may be desirable particularly if specific and defined external entities have the potential for major financial gain based on project developments. However, with the SCRI the 100% match requirement doesn’t appear to be in the best public interest, because: 1. the potential for gain is skewed toward a broad producer/consumer group(s) vs. a targeted single entity, and 2. there is potential to discriminate against unsolved problems defined by a small producer/consumer group(s) and thus limit the availability of choices that support the public good and health.

The Panel realizes making this change will require legislative action.

Minimum allocation to each program area

Part of the legislation initiating the SCRI specifies that a minimum of 10% of the Program funds shall be invested in each of the five programmatic areas.

The ***Panel recommends that this specification be set aside.*** The allocation of a minimum of 10% to each of the five program areas represented good guidance in initiating the Program. As this Program has developed, however, experience has shown that review based on relevancy and scientific merit resulted in the funding of proposals from each of the programmatic areas. Making these allocation decisions and calculations represents a non-productive assignment.

Moreover, one of the programmatic areas, food safety, has been challenged by low submission, perhaps because there are numerous other grant opportunities in USDA and other Federal agencies to address food safety issues. Thus, requiring a minimum 10% funding in this area could mean that lower ranking food safety proposals would need to be funded ahead of outstanding proposals in one of the other four programmatic areas.

Education component

NIFA had proposed the creation of an education component option within the SCRI Program. The ***Panel recommends that an education component not be created in the SCRI Program given the current level of funding.*** There are already a significant number of high quality research proposals that cannot be funded due to budget limitations. The Panel recognizes the importance of education in the specialty crop arena. The SCRI Program leaders could provide SCRI applicants information on other programs that have education funding opportunities. If and when full Program funding is realized there should be a careful strategic planning process before expanding the SCRI Program to include an educational

initiative. In the Accomplishment section the Panel identified the importance of developing a mechanism to track students and post-docs involved in grants as a measure of potential workforce development.

CONCLUSION

An external Panel reviewed the SCRI Program. The Review was based on a Study Document developed by program management, additional input from a diverse group of individuals ranging from program and review managers to grant applicants, and recipients as well as an onsite discussion with Agency management. The Review Panel believes that the SCRI Program is following the guidelines mandated by the 2008 Farm Bill. The Panel views the SCRI as an essential/critical Program to maintain and enhance the competitiveness of the specialty crop industry in the U.S. Further, SCRI is making contributions to the USDA science priorities: 1. Keep American agriculture competitive while ending world hunger. 2. Improve nutrition and end child obesity. 3. Improve food safety for all Americans. 4. Secure America's energy future. 5. Mitigate and adapt to climate change.

The Panel is highly complimentary of the SCRI with respect to how the Program is conducted, the dedication and enthusiasm of management, and the progress in the funded projects. Results from funded projects that are now in mid-stream have already demonstrated value to the specialty crop industry.

The recommendations offered by the Panel do not represent suggestions for orders of magnitude change but rather constitute incremental enhancements to the Program as it moves forward, evolves and matures.

Outline of Review Panel Recommendations for the Specialty Crops Competitive Grant Program

FOCUS

Specialty crop needs, relevancy

Develop and enhance the need/relevancy criteria and evaluation information in the RFA
Give need and relevance an increased emphasis, increased visibility, in the proposal evaluation process

Stakeholder role

Further promote and strengthen the stakeholder involvement in additional ways
Require each grant to have an active “Project Stakeholder Committee”

APPROACH

Planning Grant

Modify language in the RFA to clearly state that there is opportunity to apply for two types of Planning Grants

RFA Language

Incorporate definitive language in the RFA to invite “specific targeted projects”

Scientific review expertise

Consider involving scientists from outside the immediate specialty crop arena on proposal evaluation committee

Logic model

Review and further develop logic model

Accomplishment Reporting

Establish a reporting system to better document project description, approach, and impact

Develop a set of Program metrics that identify the key indicators of Program success

eXtension

Review the appropriateness of funding eXtension in the SCRI Program

OUTREACH

Participant diversity

Work with representatives of limited acreage crops and the 1890, 1994 and Hispanic- serving institutions to help build the infrastructure and capacity to submit grants

Reporting/Marketing

Develop an information marketing strategy for the Program

FINANCE

Match requirement

Significantly modify the 100% match requirement

Minimum allocation to each program area

Remove requirement that specifies programmatic fund allocation

Education component

Do not create an education component in the SCRI Program

SCRI Review Panel

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